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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/097,221	06/12/98	BERTRAM R	LINAB-48525

IM22/0908

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EXAMINER	
NOLAN, S	
ART UNIT	**PAPER NUMBER**
1772	3

DATE MAILED: 09/08/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/097221	BERTRAM
Examiner	**Group Art Unit**
NOLAN	1772

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-35 is/are pending in the application.

Of the above claim(s) 16-35 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-15 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☒ Claim(s) 1-35 are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 11 9(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____.

Attachment(s)

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☒ Notice of References Cited, PTO-892

☐ Notice of Informal Patent Application, PTO-152

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Other _____

Office Action Summary

DETAILED ACTION

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-15 are drawn to a method of treating a conduit, classified in class 156, subclass 294.

II. Claims 16-35 are drawn to a composite material and a load bearing structure, classified in class 428, subclass 36.1.

2. The inventions are distinct, each from the other, for the following reasons:

3. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the composite of Group II could be made via sequential coating/laminating operations, instead of via the process of Group I.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with David Parkhurst on August 30, 1999, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-15. Affirmation of this election must be made in replying to this Office action. Claims 16-35 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as reciting a non-elected invention.

Information Disclosure Statement

6. The information disclosure statement submitted on September 11, 1998 (Paper No. 2) has been considered. A copy of the initialed form PTO 1449 is enclosed.

Drawings

7. A Notice of Draftsperson's Patent Drawing Review is enclosed.

Summary of Claims

8. The elected claims can be summarized as follows:

Claim 1 is drawn to a method of treating a conduit by:

a) impregnating a thermoplastic material with a reactive resin to make A,

b) positioning A over the inner surface of a conduit C at a distance therefrom,

c) mixing thermosetting resin and curing agent to obtain a mix B,

d) inserting B between A and C,

e) bonding B to C, and

f) chemically bonding regions of A to regions of B.

Claim 2 depends on claim 1 and calls for expanding B. Claim 3 depends on claim 1 and requires that the thermoplastic in A be PVC. Claim 4 depends on claim 3 and recites the strength of the PVC. Claim 5 depends on claim 1 and calls for a Markush group of resins in B. Claim 6 depends on claim 5 and requires that the resin in B be a polyurethane. Claim 7 depends on claim 6 and recites a volumetric ratio of resin to curing agent in B. Claim 8 depends on claim 6 and is of indefinite scope. Claim 9 depends on claim 1 and contains an indefinite limitation related to the

thickness of A's thermoplastic component. Claim 10 depends on claim 1 and calls for a surfactant in B. Claim 11 depends on claim 1 and recites a surface area limitation for A. Claim 12 depends on claim 11 and limits the positioning of A. Claim 13 depends on claim 1 and specifies that B contains silanes. Claim 14 depends on claim 1 and requires that the curing agent of B bonds with the resin of A. Claim 15 depends on claim 6 and relates to the expansion of B via the use of (1) a gaseous blowing agent and (2) a second blowing agent.

Claims 16-35 are withdrawn as non-elected.

Claim Rejections - 35 USC § 112

6. Claims 8 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 is confusing. Is the claim intended to limit the impregnating process? The chemical nature of the resin? Both? Clarification is required.

Claim 9 is indefinite. The claim attempts to set forth a mathematical relationship (note "the sum of"at line 3) between the distance between the faces of A and the distance to the substrate C. However, that relationship is not specified. Clarification is required.

Claim Rejections - 35 USC § 103

7. Claims 1-12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Offill (US 5,817,200) and Livingston (US 5,879,501) and Rosemund et al (US 4,060,439).

Offill shows a method for surfacing pipes and other structures (col. 1, lines 12+) by placing a liner having protrusions or ribs on its back face into the pipe and then injecting a resinous "carrier"/interlayer (col. 6, lines 53+) between the liner and the pipe surface to form a composite. See the abstract. The thickness of the polyvinyl chloride (PVC) liner used is said to be related to such factors as flexibility, geometry, etc. (col. 5, lines 45+). Offill does not teach the chemical composition of applicant's urethane interlayer.

Livingston seals sewer lines (abstract) using PVC liners (col. 1, line 49) by spraying an isocyanate-based resin interlayer between the liner and the pipe surface (col. 6, lines 30+). Livingston does not show urethanes or the other chemical ingredients, other than silanes [as primers, see col. 5, line 4] recited in the claims.

Rosemund et al shows urethane--i.e., isocyanate/polyol--foams being used to bond various substrates, including PVC (col. 8, line 4), and cement (col. 8, line 14). The foams can contain surfactants (col. 7, line 61), blowing agents (col. 7, lines 24+), and curing agents (col. 6). Rosemund et al do not show silanes or the claimed pipe treating process.

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to employ the urethanes, surfactants, blowing agents and curing agents of Rosemund et al in urethane foams to be employed as interlayers in the processes of Offill or Livingston to treat sewer pipes. The selection of suitable thicknesses for the PVC liner would have been obvious matter of design/engineering choice, as taught by Offill.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Offill, Livingston and Rosemund et al as applied to claims 1-12, 14, and 15 above, and further in view of Ranney et al (US 4,015,044).

Ranney et al show silane primers blended with urethane sealants to be use with a variety of substrates. See the abstract and col. 7, lines 14+.

It would have been obvious to one of ordinary skill in the art to blend the silanes of Ranney et al into the urethane foam to be used as interlayers in the process suggested by the combination of Offill or Livingston with Rosemund, above.

Conclusion

Any inquiry concerning this communication should be directed to Sandra M. Nolan, whose telephone number is (703) 308-9545. She can normally be reached on Monday through Thursday from 7:00 am to 4:00 pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ellis P. Robinson, can be reached on (703) 308-2364. The fax phone number for the art unit is (703) 305-5408. The telephone number for the receptionist is (703) 308-0661.

Ellis P. Robinson
Supervisory Patent Examiner
Technology Center 1700

SMN/smn
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